

## POWER SECTION

**Model No: AT475456.0**

Revised: 9/22/2020

Rotor Specifications	
	inches
Overall Length	179.00
Contour Length	173.00
Major Diameter	2.912
Eccentricity	0.246
Head diameter	2.750
Thread Form	2.375 HEF Modified
Weight	244 lbs
Material	17-4 PH <sup>1</sup>

Stator Specifications	
	inches
Overall Length	187.00
Tube OD	4.75
Tube ID	3.75
Rubber Cutback Top/End	8.00 / 8.00
Weight	401 lbs
Number of Stages	6.0
Tube Material	4140/4142 Alloy Steel
Rubber Options	NBR-HPW & NBR-HPO

NBR-HPW (in)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	75 °F	125 °F	175 °F	250 °F	300 °F <sup>3</sup>
.5 US						
STD	2.420	0.000	0.012	0.024	0.042	0.054
.5 OS						
1.0 OS	2.438	-0.018	-0.006	0.006	0.023	0.035
1.5 OS						
2.0 OS						
2.5 OS						

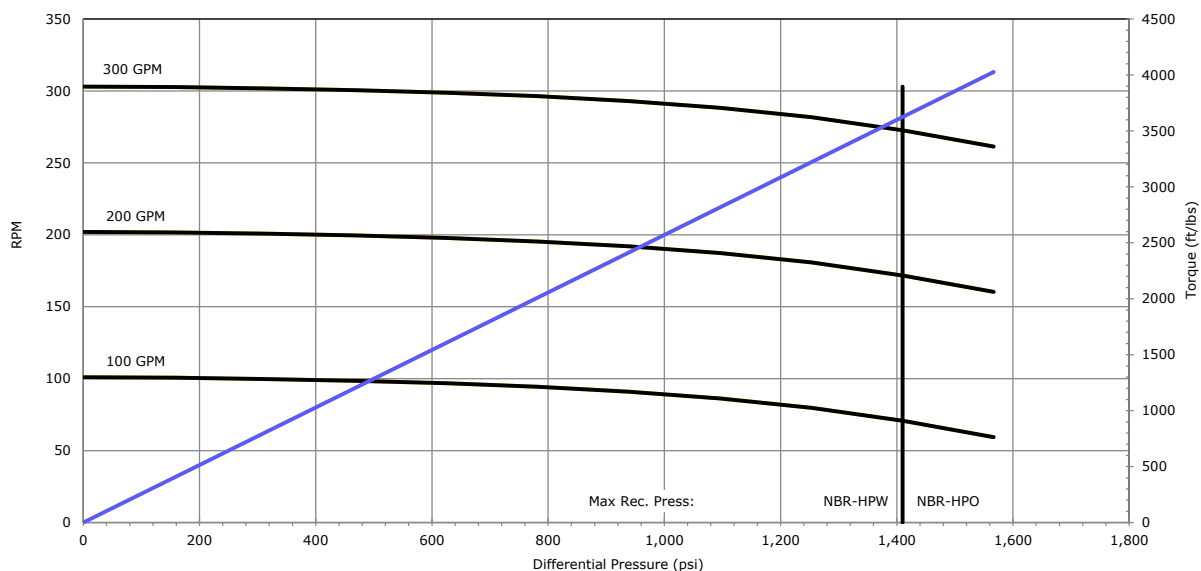
NBR-HPO (in)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	75 °F	125 °F	175 °F	250 °F	300 °F <sup>3</sup>
.5 US						
STD	2.420	0.000	0.012	0.024	0.042	0.054
.5 OS						
1.0 OS	2.438	-0.018	-0.006	0.006	0.023	0.035
1.5 OS						
2.0 OS						
2.5 OS						

Performance Specifications	
Flow Range (gpm)	100 - 300
Speed Range (rpm)	100 - 300
Torque Slope (ft-lb/psi)	2.57
Rotation (rev/gal)	1.010
Off Bottom Pressure (psi)	90

Performance Details		NBR-HPW	NBR-HPO
Max Diff Press (psi)		1410	1410
Stall Diff Press (psi)		2230	2230
Max Torque (ft-lb)		3630	3630
Stall Torque (ft-lb)		5710	5710

■ (NBR-HPW/HPO)

■ Torque



<sup>1</sup> Coating options of chrome or tungsten carbide are available <sup>2</sup> Vector Gauge Readings at Room Temp 75°F <sup>3</sup> BHCT Exceeding 320°F will void warranty for NBR-HPW/HPO.

Performance curves are based on new rotor and stator dimensions and for reference only. Actual performance may vary depending on fit and drilling conditions. The stall torque may exceed that specified for the connected components. Operating over the recommended limits may result in damage to the power section and connected components. Please visit [www.AbacoDrilling.com](http://www.AbacoDrilling.com) for the latest specification revisions.

### LOCATIONS

US: Headquarters 713 Northpark Central Dr., #400 Houston, TX 77073 - Tel: (281) 869-0700 - Fax: (281) 869-0701  
 US: Sales & Distribution 11308 West Interstate 20 East, Odessa, TX 79765 - Tel: (432) 248-1814  
 CANADA: Stator Manufacturing 6303-39th Street Leduc, Alberta T9E 0Z3 Canada - Tel: (780) 986-8947 - Fax: (780) 986-8842  
 DUBAI UAE: Stator Manufacturing Oilfields Supply Center B#57, Jebel Ali, Dubai UAE, P.O. Box 19909 - Tel: 971-4-870-8600

## POWER SECTION - METRIC

**Model No: AT475456.0**

Revised: 9/22/2020

Rotor Specifications	
	mm
Overall Length	4546.6
Contour Length	4394.2
Major Diameter	73.96
Eccentricity	6.25
Head diameter	69.85
Thread Form	2.375 HEF Modified
Weight	111 kg
Material	17-4 PH <sup>1</sup>

Stator Specifications	
	mm
Overall Length	4749.8
Tube OD	120.7
Tube ID	95.3
Rubber Cutback Top/End	203.0 / 203.0
Weight	182 kg
Number of Stages	6.0
Tube Material	4140/4142 Seamless Alloy Steel
Rubber Options	NBR-HPW & NBR-HPO

NBR-HPW (mm)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	25 °C	75 °C	100 °C	125 °C	150 °C <sup>3</sup>
.5 US						
STD	61.47	0.00	0.55	0.82	1.09	1.37
.5 OS						
1.0 OS	61.93	-0.46	0.08	0.35	0.62	0.89
1.5 OS						
2.0 OS						
2.5 OS						

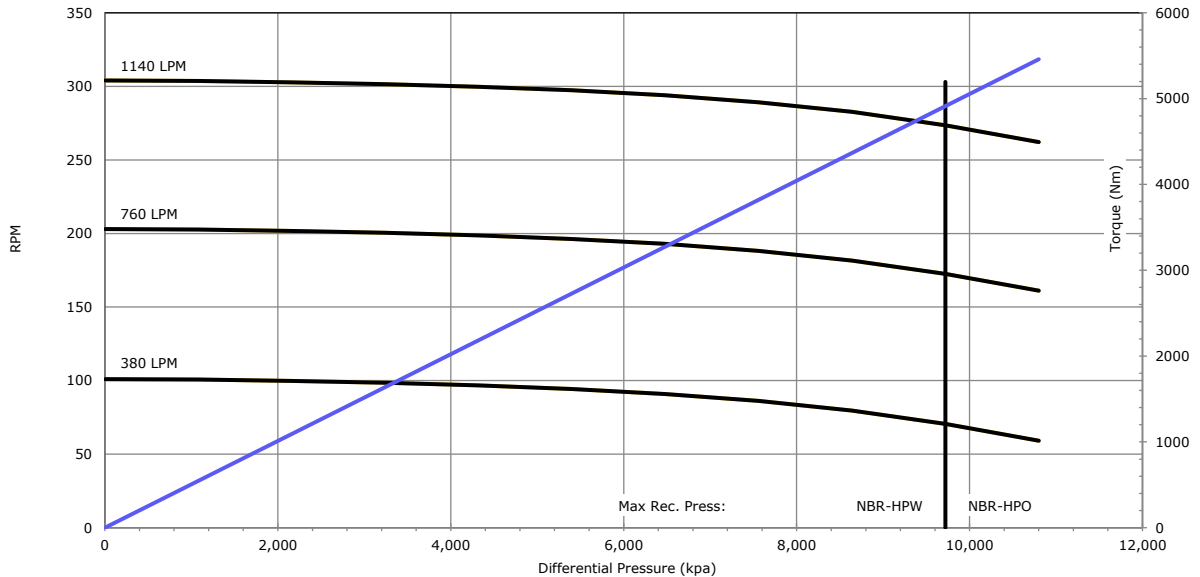
NBR-HPO (mm)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	25 °C	75 °C	100 °C	125 °C	150 °C <sup>3</sup>
.5 US						
STD	61.47	0.00	0.55	0.82	1.09	1.37
.5 OS						
1.0 OS	61.93	-0.46	0.08	0.35	0.62	0.89
1.5 OS						
2.0 OS						
2.5 OS						

Performance Specifications	
Flow Range (lpm)	380 - 1140
Speed Range (rpm)	100 - 300
Torque Slope (Nm/kpa)	0.51
Rotation (rev/Liter)	0.2668
Off Bottom Pressure (kpa)	620

Performance Details		
	NBR-HPW	NBR-HPO
Max Diff Press (kpa)	9800	9800
Stall Diff Press (kpa)	15300	15400
Max Torque (Nm)	5000	5000
Stall Torque (Nm)	7800	7800

■ (NBR-HPW/HPO)

■ Torque



<sup>1</sup> Coating options of chrome or tungsten carbide are available <sup>2</sup> Vector Gauge Readings at Room Temp 25°C <sup>3</sup> BHCT Exceeding 160°C will void warranty for NBR-HPW/HPO.

Performance curves are based on new rotor and stator dimensions and for reference only. Actual performance may vary depending on fit and drilling conditions. The stall torque may exceed that specified for the connected components. Operating over the recommended limits may result in damage to the power section and connected components. Please visit [www.AbacoDrilling.com](http://www.AbacoDrilling.com) for the latest specification revisions.

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